



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/536,741	05/27/2005	Goro Katsuyama	2271/74479	9810
23432 7590 02/19/2008 COOPER & DUNHAM, LLP 1185 AVENUE OF THE AMERICAS NEW YORK, NY 10036				
EXAMINER				
DUBNOW, JOSHUA M				
ART UNIT		PAPER NUMBER		
2861				
MAIL DATE		DELIVERY MODE		
02/19/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/536,741

**Applicant(s)**

KATSUYAMA ET AL.

**Examiner**

Joshua M. Dubnow

**Art Unit**

2861

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 and 28-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 6, and 28-35 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF-08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

Receipt is acknowledged of applicant's amendment filed November 26, 2007.

Claim(s) 7-27 have been canceled without prejudice. Claim(s) 1-6 and 28-35 are pending, and an action on the merits is as follows.

#### ***Claim Objections***

1. Claim 4 is objected to because of the following informalities: It is unclear what release mechanism is applying pressure. It appears that the applicant intends to mean pressure from the feed roller is released from the stack of paper. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 5 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The amendment introduces new matter that was not in the specification or claims when the application was filed.

***Claim Rejections - 35 USC § 103***

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1-3, 5, 6, 28-31, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Uchiyama (JP 2001130093)** in view of **McCue, Jr. et al. (U.S. Patent # 6,325,503)**.

Considering **claim 1**, Uchiyama discloses an image forming apparatus (Figure 1) comprising a substantially flat top face (3), a front face slanted such that the bottom side recedes toward a back face of the apparatus (Figure 1), and a paper feed tray (5) that is disposed at a lower position on the front face protruding in an opposite direction to the receding direction.

Uchiyama fails to disclose a paper discharge tray also disposed at a lower position on the front face protruding in an opposite direction.

However, McCue et al. teaches a similar image forming apparatus (20) with a paper discharge tray (30) and a paper feed tray (42) disposed at a lower portion of the front face. The trays protrude away from the back face (Figure 1).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the image forming apparatus of Uchiyama with the teaching of McCue et al. so that the paper discharge tray is located at a lower portion of the front face. Placing the tray near the paper feed tray would simplify the process of removing printed sheets and loading new ones because the trays are located

in the same area. A process requiring printed sheets to be reloaded into the feed tray would also be more efficient.

Considering **claim 2**, and as applied to claim 1 above, Uchiyama discloses that the paper feed tray is provided under the paper discharge tray (Figure 1).

Considering **claim 3**, and as applied to claim 1 above, McCue et al. teaches that the paper discharge tray is tiltable upward and downward (54, Figures 1, 2).

Considering **claim 5**, and as applied to claim 3 above, McCue et al. teaches that when the paper discharge tray (30) is tilted upward, the paper feed tray (42) moves in a direction opposite to the direction the paper is fed (column 7 lines 21-42).

Considering **claim 6**, and as applied to claim 5 above, McCue et al. teaches that an opening of the paper feed tray is determined based on the angle at which the discharge tray and the distance to which the feed tray is drawn (Figure 1). The more the discharge tray is tilted upward or the more the feed tray is drawn out, the greater the opening of the feed tray.

Considering **claim 28**, and as applied to claim 6 above, McCue et al. teaches that the paper feed tray has an opening on the front face (Figure 1) and an end fence (46) for blocking the opening.

Considering **claim 29**, and as applied to claim 1 above, McCue et al. teaches that the paper discharge tray (30) covers the paper feed tray (42) as a top cover (Figure 1).

Considering **claim 30**, and as applied to claim 1 above, McCue et al. teaches an operations unit (34) on the front face protruding in a direction away from the back face of the apparatus (Figure 1).

Considering **claim 31**, and as applied to claim 1 above, McCue et al. teaches a recording head that discharges recording liquid for forming images (column 6 lines 30-35).

Considering **claim 35**, and as applied to claim 1 above, McCue et al. teaches that an operations unit (34) is provided on the front face of the apparatus (Figure 1).

3. Claims 32-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Uchiyama (JP 2001130093)** in view of **McCue, Jr. et al. (U.S. Patent # 6,325,503)** further in view of **Ishizawa et al. (U.S. Publication # 2002/0093556)**.

Considering **claim 32**, and as applied to claim 31 above, Uchiyama as modified by McCue et al. disclose and teach an image forming apparatus comprising all of the claimed limitations discussed above.

Uchiyama as modified by McCue et al. fail to explicitly disclose a recording liquid cartridge that supplies liquid to a sub-tank that supplies it to the recording head.

However, Ishizawa et al. teaches an image forming apparatus (Figure 1) that comprises a sub-tank (7) that supplies recording liquid to a recording head (1) and a recording liquid cartridge (9) that supplies the liquid to the sub-tank (Figure 1).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify image forming apparatus of Uchiyama and

McCue et al. with the teaching of Ishizawa et al. so that the recording head does not need to move a full tank of ink across the print zone as it prints and a user can refill the cartridge without the possibility of interfering with the recording head.

Considering **claim 33** and **claim 34**, and as applied to claim 32 above, Ishizawa et al. does not explicitly teach that the cartridge is loaded into a loading unit on the front face in the direction in which the paper is fed. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made for the cartridges (9) to be loaded into apparatus through the front face in that direction in order to make the cartridge replacement process easier and more efficient for a user to perform.

#### ***Allowable Subject Matter***

4. Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Response to Arguments***

5. Applicant's arguments with respect to claims 1-6 have been considered but are moot in view of the new ground(s) of rejection. Applicant states that the top cover of the Katsuyama reference does not have a substantially flat top face. However, the top face is smooth and even meaning it is viewed as flat, and the Uchiyama reference also discloses a printer with a substantially flat top face. Therefore, the combination of the

Uchiyama reference as modified by the McCue et al. reference discloses and teaches the claimed limitations of claim 1 and dependent claims.

### ***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua M. Dubnow whose telephone number is (571)270-1337. The examiner can normally be reached on Monday-Friday, 8:30-5:00.



If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Luu can be reached on 571-272-7663. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Joshua M Dubnow/  
Examiner, Art Unit 2861

February 8, 2008

/LUU MATTHEW/

Supervisory Patent Examiner, Art Unit 2861